

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****In re United States Patent Application of:****Docket No.: 4115-197****Applicants: SCHREIER, Harold J., et al.****Conf. No.: 6432****Application No.: 10/588,256****Art Unit: 1724****Date Filed: July 29, 2006****Examiner: Not Yet Assigned****Title: DISSIMILATORY SULFATE  
REDUCTION AS A PROCESS  
TO PROMOTE  
DENITRIFICATION IN  
MARINE RECIRCULATING  
AQUACULTURE SYSTEMS****Customer No.:****23448****FIRST CLASS MAIL CERTIFICATE**

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**Barbara Owens****November 1, 2006****Date of Mailing****INFORMATION DISCLOSURE STATEMENT IN  
U.S. PATENT APPLICATION NO. 10/588,256**

Mail Stop Amendment  
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P.O. Box 1450  
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Sir:

Pursuant to 37 C.F.R. §1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached Information Disclosure Statement forms PTO/SB/08a and PTO/SB08b. One copy of each foreign patent and each non-patent reference are attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No certification or fee is required.

Respectfully submitted,



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**Enclosures:**

**IDS Forms PTO/SB/08a and PTO/SB/08b [ 3 pg(s).]**

**Foreign Patent References [ 59 pgs.]**

**Non-Patent References [ 107 pgs.]**

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PTO/SB/08a (09-06)

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

**Complete if Known**

Application Number	10/588,256
Filing Date	7/29/2006
First Named Inventor	Schreier et al.
Art Unit	1724
Examiner Name	Not Yet Assigned
Attorney Docket Number	4115-197

Sheet	1	of	3	Attorney Docket Number	4115-197
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## U.S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	†
		Country Code* - Number* - Kind Code* (if known)					
/FP/	AC	JP - 2002-159992 - A		06-04-2002	Boku, Wanchoru, et al.		✓
/FP/	AD	WO - 98/07664 - A1		02-26-1998	Van Loosdrecht, Marinus Cornelis Maria, et al.		

Examiner Signature	/Fred Prince/	Date Considered	03/26/2008
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Application Number	
		10/588,256	
		Filing Date	
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		First Named Inventor	
Schreier et al.		Art Unit	
1724		Examiner Name	
Not Yet Assigned		Attorney Docket Number	
4115-197			
Sheet	2	of	3

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/FP/	AE	DAIMS, H., ET AL., Novel Nitrospira-like bacteria as dominant nitrite-oxidizers in biofilms from wastewater treatment plants: diversity..., Water Science and Technology, 2000, Page(s) 85-90, Volume 41, Number 4-5	
/FP/	AF	HOVANEK, T.A., ET AL., Comparative analysis of nitrifying bacteria associated with freshwater and marine aquaria, Appl. Environ. Microbiol., August 1996, Page(s) 2888-2896, Volume 62, Number 8	
/FP/	AG	KLOEP, FRANK, ET AL., Performance and microbial structure of a nitrifying fluidized-bed reactor, Wat. Res., January 1, 2000, Page(s) 311-319, Volume 34, Number 1	
/FP/	AH	MEGONIGAL, J.P., ET AL., Anaerobic metabolism: Linkages to trace gases and aerobic processes, Biochemistry (W.H. Schlesinger, Ed), 2004, Page(s) 359-361, Publisher: Elsevier-Pergamon, Published in: Oxford, UK	
/FP/	AI	O'DONNELL, ANTHONY G., ET AL., 16S rDNA methods in soil microbiology, Current Opin. Biotech., June 1999, Page(s) 225-229, Volume 10, Number 3	
/FP/	AJ	PRINCIC, ALENKA, ET AL., Effects of pH and Oxygen and Ammonium Concentrations on the Community Structure of Nitrifying Bacteria from Wastewater, Appl. Environ. Microbiol., October 1998, Page(s) 3584-3590, Volume 64, Number 10	
/FP/	AK	RUSTEN, BJØRN, ET AL., Moving bed biofilm reactors and chemical precipitation for high efficiency treatment of wastewater from small..., Water Sci. Tech., 1997, Page(s) 71-79, Volume 35, Number 6	
/FP/	AL	RUSTEN, B., ET AL., Pilot testing and preliminary design of moving bed biofilm reactors for nitrogen removal at the FREVAR wastewater..., Water Sci. Tech., 2000, Page(s) 13-20, Volume 41, Number 4-5	
/FP/	AM	STROUS, MARC, ET AL., Missing lithotroph identified as new planctomycete, Nature, July 29, 1999, Page(s) 446-449, Volume 400, Number 6743	
/FP/	AN	TAL, YOSSIE, ET AL., Characterization of the microbial community and nitrogen transformation processes associated with moving bed..., Aquaculture, January 10, 2003, Page(s) 187-202, Volume 215, Number 1-4	

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\*Applicant's unique citation designation number (optional). \*Applicant is to place a check mark here if English language Translation is attached.

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<b>Examiner Name</b>	Not Yet Assigned
<b>Attorney Docket Number</b>	4115-197

Sheet	3	of	3
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